



PATENT

Atty. Docket No. 8009-24

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Clive Clayton et al.

SERIAL NO.: 10/811,610

FILED: March 29, 2004

DATED: July 27, 2004

FOR: DENSIFICATION OF THERMAL SPRAY COATINGS

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to Applicant(s) duty of disclosure, the information listed in the attached form PTO-1449 is brought to the attention of the Examiner. Copies of the listed items are enclosed.

The citation of the listed items is not a representation that they constitute a complete or exhaustive listing of the relevant art or that the references are prior art.

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postpaid in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 27, 2004.

Dated: July 27, 2004


Nathaniel T. Wallace

The items listed are submitted in good faith, but are not intended to substitute for the Examiner's search. It is hoped, however, that in addition to apprising the Examiner of these particular items, they will assist in identifying fields of search and in making as full and complete a search as possible.

The filing of this information disclosure statement is not an admission that the information cited herein is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56(b).

- ☐ This information disclosure statement is being filed within three (3) months of the filing date of this application.
- ☐ This information disclosure statement is being filed concurrently with the Request for Continued Examination (RCE) attached herewith
- ☐ This information disclosure statement is being filed within three (3) months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application.
- ☒ To the best of Applicant(s) knowledge, this information disclosure statement is being filed before the date of mailing of a first Office Action on the merits in connection with this case.
- ☐ Statement under 37 C.F.R. § 1.97(e):
I hereby state that each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this statement.
- ☐ Enclosed herewith is a petition under 37 C.F.R. §1.97(d)(ii).
 - ☐ Enclosed by check is the petition fee of \$130.00. 37 C.F.R. §1.17(i)(1))
- ☐ Please charge the \$130.00 petition fee to Deposit Account No. 50-0679.

- ☐ Enclosed by check is the \$180.00 fee required by 37 C.F.R. §1.17(p).
- ☐ Please charge the \$180.00 fee required by 37 C.F.R. §1.17(p) to a Credit Card. Form PTO-2038 is enclosed.
- ☒ Please charge any deficiency as well as any other fee(s) which may become due under 37 C.F.R. §1.16 and/or §1.17 at any time during the pendency of this application, or credit any overpayment of such fee(s) to Deposit Account 50-0679. Also, in the event any extensions of time for responding and/or a petition under 37 C.F.R. §1.17(i)(i) are required for the pending application(s), please treat this paper as a petition to extend the time and/or enter this Information Disclosure Statement as required and charge Deposit Account No. 50-0679 therefor. TWO (2) COPIES OF THIS SHEET ARE ENCLOSED.

The claims of the application as now presented are believed to patentably distinguish over the prior art and to be in condition for allowance. Early and favorable consideration of the case is respectfully requested.

Respectfully submitted,



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Form PTO-1449

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

8009-24

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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

(Use several sheets if necessary)

APPLICANT

Clive Clayton et al.

FILING DATE

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GROUP ART UNIT

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

	PUBLICATION NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT TRANSLATION	
						YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

John A. Wert, Microstructures of Friction Stir Weld Joints between an Aluminum-base Metal Matrix Composite and a Monolithic Aluminum Alloy, *Scripta Materialia*, 49 (2003) pp. 607-612.

K. Colligan, Material Flow Behavior during Friction Stir Welding of Aluminum, Supplement to the *Welding Journal*, July 1999, pp. 229s-237s

M. Guerra et al., Flow Patterns during Friction Stir Welding, *Materials Characterization*, 39 (2003), pp. 95-101.

J.H. Ouyang et al., Material Flow and Microstructure in the Friction Stir Butt Welds of the Same and Dissimilar Aluminum Alloys, *Journal of Materials Engineering and Performance*, Vol. 11(1), February 2002, pp. 51-63

T.U. Seidel et al., Visualization of the Material Flow in AA2195 Friction-Stir Welds Using a Marker Insert Technique, *Metallurgical and Materials Transactions*, Vol. 32A, November 2001, pp. 2879-2884

K.N. Krishnan, On the Formation of Onion Rings in Friction Stir Welds, *Materials Science and Engineering*, A327 (2002), pp. 246-251

EXAMINER

DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(Form PTO-1449 [6-4])

Form PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO. 8009-24		SERIAL NO. 10/811,610	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)				APPLICANT Clive Clayton et al.			
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FOREIGN PATENT DOCUMENTS							
		PUBLICATION NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT TRANSLATION
							YES NO
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
			W.B. Lee et al., <u>The Mechanical Properties Related to the Dominant Microstructure in the Weld Zone of Dissimilar formed Al Alloy Joints by Friction Stir Welding</u> , <i>Journal of Materials Science</i> , 38 (2003) pp. 4183-4191				
			Henry J. White, <u>Deformation During Friction Stir Welding</u> , 2001 NASA/ASEE Summer Faculty Fellowship Program, Marshall Space Flight Center - The University of Alabama in Huntsville				
			Takeshi Shinoda et al., <u>Proposals of Novel Surface Modification Technology using Friction Stir Welding Phenomenon</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 2837-2842				
			T. Nishihara, <u>Development of Friction Stir Forming</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 2971-2978				
			R.S. Mishra et al., <u>Friction Stir Processing: A Novel Technique for Fabrication of Surface Composite</u> , <i>Materials Science and Engineering</i> , A341 (2003) pp. 307-310.				
			Matt Collier et al., <u>Grade Development of Polycrystalline Cubic Boron Nitride for Friction Stir Processing of Ferrous Alloys</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 3011-3016.				
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FOREIGN PATENT DOCUMENTS								
		PUBLICATION NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	ABSTRACT TRANSLATION	
							YES	NO

OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)		
		S.P. Lynch et al., <u>Friction-Stir Processing of a High-Damping Mn-Cu Alloy used for Marine Propellers</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 2903-2908
		William A. Palko et al., <u>Investigation of the Use of Friction Stir Processing to Repair and Locally Enhance the Properties of Large Ni Al Bronze Propellers</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 2909-2914
		K. Oh-ishi et al., <u>The Influence of Friction Stir Processing on Microstructure and Properties of a Cast Nickel Aluminum Bronze Material</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 2885-2890
		Z.Y. Ma et al., <u>Microstructural Modification of Cast Aluminum Alloys Via Friction Stir Processing</u> , <i>Materials Science Forum</i> , Vols. 426-432 (2003), pp. 2891-2896

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